Journal of Health Communication, 19:3–9, 2014
Published with license by Taylor & Francis
ISSN: 1081-0730 print/1087-0415 online
DOI: 10.1080/10810730.2014.934937

Routledge
Taylor & Francis Group

Editorial

Population-Level Behavior Change to Enhance Child Survival and Development in Low- and Middle-Income Countries

ELIZABETH FOX

Office of Health, Infectious Diseases and Nutrition, Global Health Bureau, U.S. Agency for International Development, Washington, District of Columbia, USA

RAFAEL OBREGÓN

Programme Division, Communication for Development Section, United Nations Children's Fund (UNICEF), New York, New York, USA

It is fitting that this special edition of the *Journal of Health Communication* is dedicated to the evidence for the effectiveness of behavior and social change in child survival and development. The field of health communication and the use of evidence, in fact, have strong roots in the early applications of mass media and social marketing to programs for vaccines and oral rehydration therapy starting in the 1970s during the first Child Survival Revolution. A review of evidence of the effectiveness of 10 large-scale communication and behavior change programs for child survival conducted in eight developing countries in Africa, Asia, and Latin America between the late 1980s and early 1990s demonstrated substantial success in 9 of the 16 evaluated child survival-related outcomes (Hornik et al., 2002). This special issue continues this tradition of applying high standards of evidence to the review of health communication and behavior change programs.

Global progress in reducing child deaths since 1990 has been significant. The estimated annual number of under-5 deaths fell from 12.6 million to 6.6 million between 1990 and 2012 (UNICEF, 2013). Of the 6.6 million under-5 deaths in 2012, most were from preventable causes such as pneumonia, diarrhea or malaria; around 44% occurred during the neonatal period (UNICEF, 2013).

In 2012, the world recommitted to child survival with *A Promise Renewed*, a global movement to end preventable child deaths (http://www.apromiserenewed.org). A Promise Renewed brings together public, private, and civil society actors committed to advocacy and action for maternal, newborn, and child survival. A Promise Renewed emerged from the Child Survival Call to Action, convened in June 2012 by the governments of Ethiopia, India, and the United States, in collaboration

Address correspondence to Elizabeth Fox, U.S. Agency for International Development, 1300 Pennsylvania Ave NW, Washington, DC 20004, USA. E-mail: efox@usaid.gov

with the United Nations Children's Fund (UNICEF). The more than 700 government, civil society, and private sector participants who gathered for the Call to Action reaffirmed their shared commitment to scale up progress on child survival. One of the key strategic shifts of the Call to Action was to increase scale and sustain demand and supply of the highest impact, evidence-based solutions. Just a month before the event, *Lancet* had published an update on the main cause of under-5 mortality (Liu et al., 2012). This evidence helped to further focus on the main killers of children under 5 years of age.

A Promise Renewed provides a roadmap for bringing an end to preventable child death. In addition to service improvements, timely availability of commodities, and good data and monitoring to focus programs, the accomplishment of this goal requires sustained population-level behavior change. These changes affect maternal and child health. As shown in the appendix, they depend on healthy timing and spacing of pregnancy, seeking appropriate care and accessing and utilizing services, nutritional choices, and practicing preventive health care.

In addition, in September 2010, UNICEF released *Narrowing the Gaps to Meet the Goals*, which emphasized the urgency of a renewed focus on equity to address multiple disparities and deprivations that exclude significant segments of the population from accessing health and social services and put their children at a greater risk of death from preventable and treatable infectious diseases (UNICEF, 2010).

We know that improving child survival requires promotion of healthy behaviors as well as efforts to addressing social exclusion, discrimination and a range of social and behavioral determinants that cut across the life cycle. These determinants are complex. They include structural barriers, financial barriers, individual and collective motivations, social and community norms, policy environments, and cultural systems that can enable or impede individuals and communities to adopt, change, or maintain healthy behavior.

Evidence Summit

On June 3–4, 2013, the United States Agency for International Development (USAID), in collaboration with the UNICEF, hosted the Evidence Summit on Enhancing Child Survival and Development in Lower- and Middle-Income Countries by Achieving Population-Level Behavior Change in Washington, DC. Other collaborating partners included the National Institute of Mental Health, Eunice Kennedy Shriver National Institute of Child Health and Human Development, the Centers for Disease Control and Prevention, the Communication Initiative Network, and the American Psychological Association. This special issue is a product of that Evidence Summit and the enormous efforts of the literally hundreds of contributors to the evidence review process.

The overarching goal of the summit was to determine which evidence-based interventions and strategies support a sustainable shift in health-related behaviors in populations in lower- and middle-income countries to reduce under-5 morbidity and mortality. As the reader can see in the articles in this issue, the 200 or so Evidence Summit participants and, eventually, 69 authors, have gone beyond this mandate. They have delivered an exciting mix of evidence of the remarkable successes and effective interventions as well as a series of real gaps in knowledge and data. They also note the need for the field to improve the way it reports successes and failures and collectively learns.

Because development challenges are complex, intrinsically multidisciplinary, and therefore informed by diverse data inputs and expertise, evidence summits engage a broad coalition of expert contributors from across governments, academia, development agencies, and organizations from low- and middle-income countries

(e.g., Mahomes et al., 2012). The expected outcomes from summits include the following: clarity on evidence to inform policies, programs, and practice and the identification of knowledge gaps to inform a research agenda. The publication and dissemination of these eight articles are a key step to achieving these outcomes for the field of social and behavior change for child survival and development. The articles also attempt to set common, standards on what constitutes evidence of results and public health impact.

The Evidence Summit examined interventions that target health related knowledge, attitudes and, especially, behaviors that can improve health. On the basis of the extensive literature that supports such the importance of behaviors such as healthy timing and spacing of pregnancy, breastfeeding, seeking immunization, handwashing etc., we are taking it as given that obtaining population-level changes in these behaviors will have positive impacts on health. The summit focused instead on the important next step, what is the evidence for interventions designed to produce behavior change around these interventions at the individual, community and health systems/policy levels, including efforts to address gender inequality, stigma, and discrimination.

Many interventions examined were designed to improve knowledge and attitudes while others more directly targeted behaviors themselves. The logic in targeting knowledge and attitudes is the assumption that changes there are important intermediate outcomes and can ultimately impact behavior change. Because changes in knowledge and attitudes can occur without evidence of behavior change, however, we emphasized studies of interventions with behavior change or health outcomes. In many studies, we found that changes in health outcomes were the primary outcome measure and that the behavior changes assumed to mediate the effects of the intervention were not measured.

In the past, sometimes as a result of the lack of funding, or capacity, or other pressures, funders and implementers of behavior change and health communication programs have not always carried out evaluative or impact research to gauge the impact of programs. Failures were not identified and lessons learned were not collected, analyzed, or used. When programs are designed not on the basis of research and evidence but on the basis of other factors such as funding available or convenience, the field loses the ability to learn. Without data, planners cannot know what parts did or did not work, what were the most efficacious mix of interventions, or what interventions were most appropriate.

Meanwhile, gaps between knowledge and behavior, misinformation and misconceptions, and low levels of adoption of basic health behaviors by large sectors of the population continue to bedevil public health programs throughout the world. Even countries with sophisticated media markets and significant investments in behavior change communication, for instance, face these challenges.

Behavior change programs increasingly are being held to the same standards of evidence of impact as other development investments and interventions. The Evidence Summit and the resulting articles in this special issue go a long way to rethinking how to respond to the question of impact and effectiveness in a way that can be used by planners and implementers of health programs in aid and development.

The Evidence Summit stands on the shoulders of some more recent review efforts to assess the evidence around the use of interventions for behavior and social change to enhance child survival. For example, a recent systematic review of communication interventions in health, including child survival, conducted by Wakefield, Loken, and Hornik (2010), and published in *Lancet*, examined peer-reviewed and notable empirical studies available from 1998 through 2009. The authors concluded that, despite the difficulties in isolating independent effects, there

is substantive aggregate evidence that communication interventions can directly and indirectly produce positive changes or prevent negative changes in health-related behaviors across large population segments. Several other systematic reviews, peer-reviewed studies, and empirical reports (Abroms & Maibach, 2008; Hornik et al., 2002) also provide important evidence-based lessons about the contribution of communication interventions to child survival.

The method used for the gathering and review of evidence is provided in the article by Balster, Levy, and Stammer (2014). They explained that the organization of the summit and the consequent literature search began with an appreciation that interventions can target families and other caregivers, communities, and/or health systems and policies, so review teams were organized to review evidence pertaining to each of these three intervention targets (Elder et al., 2014; Farnsworth et al., 2014; Vélez et al., 2014). In addition, a preliminary field questionnaire (see Balster et al., 2014) identified gender and discrimination issues as important roadblocks to the successful implementation of behavior change interventions, so review teams were also organized to address evidence for how to intervene in these areas (Kraft et al., 2014; Nayar et al., 2014). Last, the same field survey found that development experts also wanted to know about the current evidence for the effectiveness of interventions on the basis of new technologies such as mHealth and social media, so a sixth team was assembled to address that issue (Higgs et al., 2014).

During the Evidence Summit process, it was determined that an updated review was needed on the effectiveness of mass media interventions. Although this review was not explicitly part of the Evidence Summit process and did not use exactly the same method that generated the other six review articles, the article by Naugle and Hornik (2014) is included in this issue because of its relevance to the topic.

What It All Tells Us

The combined weight of the eight articles in this journal tell us that, as a field, we have certainly passed a tipping point on continuing to question the importance of social and behavior change to achieve public health outcomes. The Evidence supporting some behavioral change interventions presented here, in fact, compares favorably to evidence in clinical research fields of biomedical interventions. Important gaps such as those around gender and discrimination still need to be filled, and areas such as longer term sustainability of change need to be further explored. Yet, today, we can move forward with confidence to apply the available evidence to achieve the important population level behavioral shifts necessary to end preventable child deaths.

It is key to ensure that the evidence of what works is integrated into national and subnational public health programs and used to tighten and focus interventions and practices for population level behavior change around the world. Along the way, global and regional advocacy to make sure that social and behavior change interventions are based on evidence and supported with adequate human and financial resources to achieve the greatest impact will remain a critical component of global and national efforts. As several authors have put it, rather than being a question of whether social and behavior change interventions can drive improvements in health outcomes, the key is to ensure that these interventions consistently measure up to the rigor, quality, and investments needed to facilitate the desired change. This is the challenge for multiple stakeholders involved in global, regional and country level efforts to ending preventable deaths and ensuring that all children survive, thrive and develop to realize their full potential.

Acknowledgments

The authors acknowledge the important role of Robert Balster, Mario Bravo, Elizabeth Higgs, Stephanie Levy, Willo Pequegnat, and Patricia Portella Souza in helping to organize the Evidence Summit and the review of the literature. Robert Balster also served as the co-editor of this special issue and Alison Breland assisted with the manuscript review process. Special thanks go to Silvio Waisbord, who greatly assisted by peer reviewing all of the articles in this issue and preparing a closing editorial based on his insights from this endeavor (Waisbord, 2014). This special issue and the Evidence Summit would not have been a success without the chairs, co-chairs, facilitators, and coordinators of the six evidence review teams that performed the critical reviews that are at the core of this special issue. Last, thanks to all of the authors of the articles; this was an enormous task reflecting your dedication to addressing global problems of child survival and development. The views and opinions expressed in this Editorial are those of the authors and not necessarily the views and opinions of USAID or UNICEF. Elizabeth Fox is an employee of USAID, and Rafael Obregón is an employee of UNICEF. The authors declare that no competing conflicts of interest exist.

References

Abroms, L. C., & Maibach, E. W. (2008). The effectiveness of mass communication to change public behavior. *Annual Review of Public Health*, *29*, 219–34.

Balster, R. L., Levy, S., & Stammer, E. (2014). Evidence acquisition and evaluation for evidence summit on population-level behavior change to enhance child survival and development in low- and middle-income countries. *Journal of Health Communication*, *19*(Suppl 1), 10–24.

Elder, J. P., Pequegnat, W., Ahmed, S., Bachman, G., Bullock, M., Carlo, W. A., ... Sweat, M. (2014). Caregiver behavior change for child survival and development in low- and middle-income countries: An examination of the evidence. *Journal of Health Communication*, *19*(Suppl 1), 25–66.

Farnsworth, S. K., Böse, K., Fajobi, O., Souza, P. P., Peniston, A., Davidson, L., ... Hodgins, S. (2014). Community engagement to enhance child survival and early development in low- and middle-income countries: An evidence review. *Journal of Health Communication*, *19*(Suppl 1), 67–88.

Higgs, E. S., Goldberg, A. B., Labrique, A. B., Cook, S. H., Schmid, C., Cole, C. F., & Obregón, R. (2014). Understanding the role of mHealth and other media interventions for behavior change to enhance child survival and development in low- and middle-income countries: An evidence review. *Journal of Health Communication*, *19*(Suppl 1), 164–189.

Hornik, R. C., McDivitt, J., Zimicki, S., Yoder, P. S., Contreras-Budge, E., McDowell, J., & Rasmuson, M. (2002). Communication in support of child survival: Evidence and explanations from eight countries. In R. C. Hornik (Ed.), *Public health communication: Evidence for behavior change* (pp. 219–248). Mahwah, NJ: Erlbaum.

Kraft, J. M., Wilkins, K. G., Morales, G. J., Widyono, M., & Middlestadt, S. E. (2014). An evidence review of gender-integrated interventions in reproductive and maternal-child health. *Journal of Health Communication*, *19*(Suppl 1), 122–141.

Liu, L., Johnson, H. L., Cousens, S., Perin, J., Scott, S., Lawn, J. E., ... Child Health Epidemiology Reference Group of WHO and UNICEF. (2012). Global, regional, and national causes of child mortality: An updated systematic analysis for 2010 with time trends since 2000. *Lancet*, *2*, 2151–2161.

Mahomes, V., Fluke, J. D., Rinehardt, R. D., & Huebner, G. (2012). Protecting children outside of family care in low and middle income countries: What does the evidence say? *Child Abuse & Neglect*, *26*, 685–688.

Naugle, D., & Hornik, R. C. (2014). Systematic review of the effectiveness of mass media interventions for child survival in low- and middle-income countries. *Journal of Health Communication*, *19*(Suppl 1), 190–215.

Nayar, U. S., Stangl, A. L., De Zalduondo, B., & Brady, L. M. (2014). Reducing stigma and discrimination to improve child health and survival in low- and middle-income countries: Promising approaches and implications for future research. *Journal of Health Communication*, *19*(Suppl 1), 142–163.

UNICEF. (2010). Narrowing the gaps to meet the goals. Retrieved from http://www.unicef.org/publications/index_55927.html

UNICEF. (2013). *Committing to child survival: A promise renewed*. New York, NY: Author. Retrieved from http://www.unicef.org/publications/files/APR_Progress_Report_2013_9_Sept_2013.pdf

Vélez, L. F., Sanitato, M., Barry, D., Alilio, M., Apfel, F., Coe, G., . . . Vorkoper, S. (2014). The role of health systems and policy in producing behavior and social change to enhance child survival and development in low- and middle-income countries: An examination of the evidence. *Journal of Health Communication*, *19*(Suppl 1), 89–121.

Waisbord, S. (2014). Where do we go next? Behavioral and social change for child survival. *Journal of Health Communication*, *19*(Suppl 1), 216–222.

Wakefield, M. A., Loken, B., & Hornik, R. C. (2010). Use of mass media campaigns to change health behaviour. *Lancet*, *376*, 1261–1271.

Appendix: Behavior Changes to Reduce Child Mortality and Improve Healthy Early Child Development

1. Newborn health
    a. Breastfeeding
    b. Birth preparedness
    c. Clean cord care
    d. Kangaroo care
    e. Chlorhexidine
    f. Resuscitation
    g. Appropriate treatment for sepsis (antibiotics—oral and injectables)
    h. Infection prevention (handwashing with soap, clean cord care)

2. Pneumonia and diarrhea
    a. Care-seeking, danger recognition, and referral
    b. Immunization (*Haemophilus influenzae* type B vaccine, pneumococcal conjugate vaccine, rotavirus, measles)
    c. Hand-washing
    d. Continued breastfeeding
    e. Appropriate treatment (oral rehydration therapy/oral rehydration solution, zinc)
    f. Appropriate treatment (antibiotics)

3. Malaria
    a. Care-seeking
    b. Insecticide treated net use
    c. Insecticide treated net access
    d. Intermittent preventive treatment of malaria in pregnancy

   e. Spraying
   f. Appropriate diagnosis and treatment

4. Nutrition
   a. Breastfeeding
   b. Complementary feeding
   c. Micronutrients

5. Immunization
   a. Demand
   b. Access

6. Prevention of mother-to-child transmission of human immunodeficiency virus
   a. Testing
   b. Breastfeeding + extended drug regimen or replacement feeding
   c. Treatment—adherence
   d. Managing losses to care follow up
   e. Treatment—access
   f. Access to testing

7. Family planning
   a. For married and sexually active unmarried youth, continuous family planning until at least age 18
   b. After a live birth, continuous family planning for at least 24 months before attempting a pregnancy
   c. End child marriage